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## Patent Abstracts of Japan

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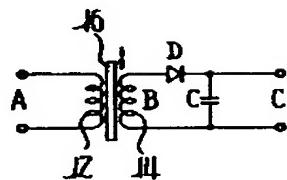
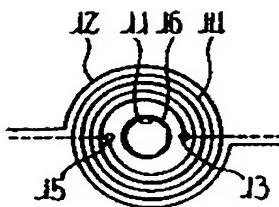
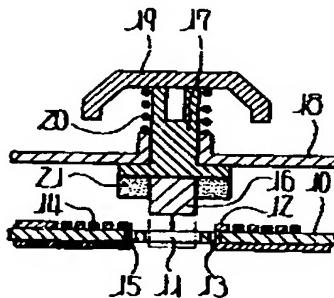
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APPLICANT : TOKYO ELECTRIC CO LTD;

INVENTOR : TAKAHASHI SEIJI;

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TITLE : SWITCH



**ABSTRACT :** PURPOSE: To obtain a switch with less number of components, high reliability, sure detection and not small height by changing the mutual inductance of the primary coil and the secondary coil by means of the movement of a magnetic substance so as to attain switching operation.

CONSTITUTION: A through-hole 11 is formed to a printed board 10, the pattern of the primary coil 12 is formed around the through-hole 11 in spiral, and one end of the primary coil 12 at the through-hole 11 is led out to the rear side of the board 10 via a through-hole 13. Further, the pattern of the secondary coil 14 is also formed to the surface of the board 10 in spiral at a position between the patterns of the primary coil 12 and one end of the coil 14 at the through-hole 11 is led out to the rear side of the printed board 10 via a through-hole 15. The magnetic substance made of ferrite and incorporated with a key stem 17 is supported freely movably in vertical direction by a base 18 at the upper part of the printed board 10. In inserting the magnetic substance 16 into the through-hole 11 as shown in dashed lines by depressing a key top 19, the mutual inductance between the primary and secondary coils 12 and 14 is increased by the magnetic substance 16 causing a voltage induced in the secondary coil 14 to be increased. The switching operation is attained by this mutual inductance change.

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